LCM1502TV
Owner's Manual

Audiovox Specialized Applications, LLC
www.asaelectronics.com
US PATENT # D467, 234

Important Notice

It is unlawful in most jurisdictions for a person to drive a motor vehicle which is equipped with a television viewer or screen that is located in the motor vehicle at any point forward of the back of the driver's seat, or that is visible, directly or indirectly, to the driver while operating the vehicle. In the interest of safety, the LCM1502TV should never be installed where it will be visible, directly or indirectly, by the operator of the motor vehicle.

Please note that the state of Rhode Island forbids the Installation of such a device in a motor vehicle.

Television Reception

This entertainment system is designed primarily for viewing pre-recorded movies or playing video games. Television reception in a moving vehicle will be limited and in some areas will not be possible due to weak and variable signal strength. Television viewing in a stationary vehicle will result in an improvement, but may still be marginal due to strength. The quality of the picture will not be consistent with home TV reception. Reception may be affected by the weather and distance from the TV station. A weak signal may cause the picture to roll, be snowy, or cause some color loss.

Congratulations on your purchase of the Flexvision LCM1502TV drop down TV/Video Monitor. The LCM1502TV has been designed to give you and your family many years of video entertainment in the mobile environment. Please read the directions that follow to familiarize yourself with the product and to ensure that you obtain the best results from your equipment. **NOTE:** Installation options vary. See the individual Owner's Manuals for each component in your system to obtain a full understanding of each component's operation.
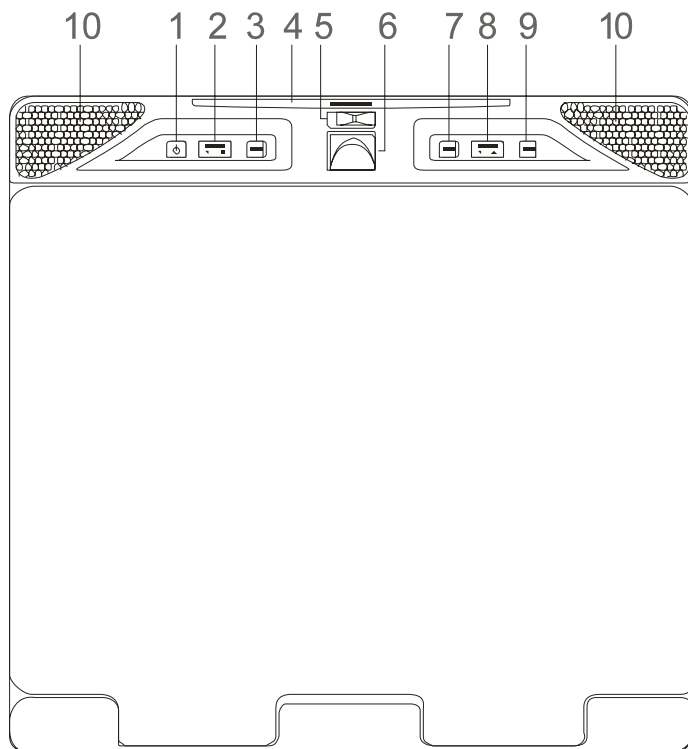
SAFETY PRECAUTION

For safety reasons, when changing Video Media it is recommended that the vehicle is not in motion, and that you do not allow children to unfasten seat belts to change Video Media or make adjustments to the system. System adjustments can be accomplished using the Remote Control while seat belts remain fastened. Enjoy your Flexvision entertainment system but remember safety of all passengers remains the number one priority.

FEATURES

- 15" TFT (Thin Film Transistor) Active Matrix LCD (Liquid Crystal Display) Monitor
- OSD (On Screen Display) For Control Of Picture Quality And Functions
- Full Function Remote Control
- 3 A/V inputs with TV Tuner as a fourth source
- IR repeater for control of Flexvision DVD/VCP through a source component harness.
- Direct single cable connection to Flexvision DVD/ VCP products
- Variable Audio output for wired headphone or external speaker connections
- Back-Lit Controls For Low Light Operation
- 49MHz RF Transmitter
- Dual Dome Lights
- A/V outputs for connection to a second monitor

FRONT PANEL FEATURE
Figure 1

10   1 2 3   4 5   6   7 8 9   10

1. POWER
2. VOLUME Up and Down
3. TV/AV
4. SENSOR EYE
5. THREE POSITION DOME LIGHT
   SWITCH
6. SCREEN RELEASE
7. MENU
8. CHANNEL Up and Down
9. ENTER
10. DOME LIGHT

FRONT PANEL FEATURES – See Figure 1

1. **Power Button –** (Bright red when system is ON, dim when system is OFF).

2. **Volume Up/Down** **–** Controls volume to external Speakers if connected. Also, used to adjust the picture control setting when "contrast", "bright", "sharpness", "color" or "tint" is displayed on the screen.

3. **TV/AV –** Any video equipment connected to the AUDIO/VIDEO inputs can be used with the TV by pressing this button. Each time the button is pressed the Audio/Video source will change in the following sequence TV, AV1, AV2 and AUX.

4. **Sensor Eye –** Allows the remote control to operate the LCM1502TV's OSD system (On Screen Display), volume to Wired Headphone Jacks (and optional external speakers), and for control of Video Media Player connected through a source component harness.

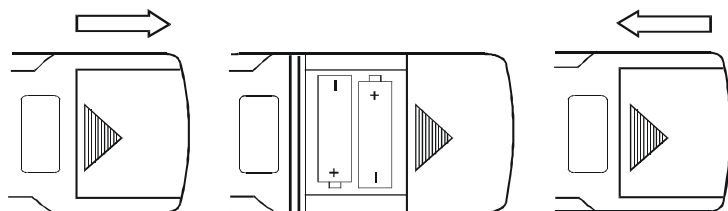5. **Three Position Dome Light Switch**
   - Auto – Automatically switched on the dome lights in conjunction with the vehicle's interior illumination.
   - Off – The Dome lights will not turn on in this position.
   - On – Turns on the Dome lights.

6. **Screen release –** Slides in the direction of the arrow to release the drop down screen.
   NOTE : For safety, hand hold the screen before you slides the screen release to drop down screen.

7. **Menu Button –** Gives you access to the OSD Main Menu.

8. **Channel Up/Down –** Changes the TV channel.

9. **ENTER Button –** Use this button to end the choice on the menu.

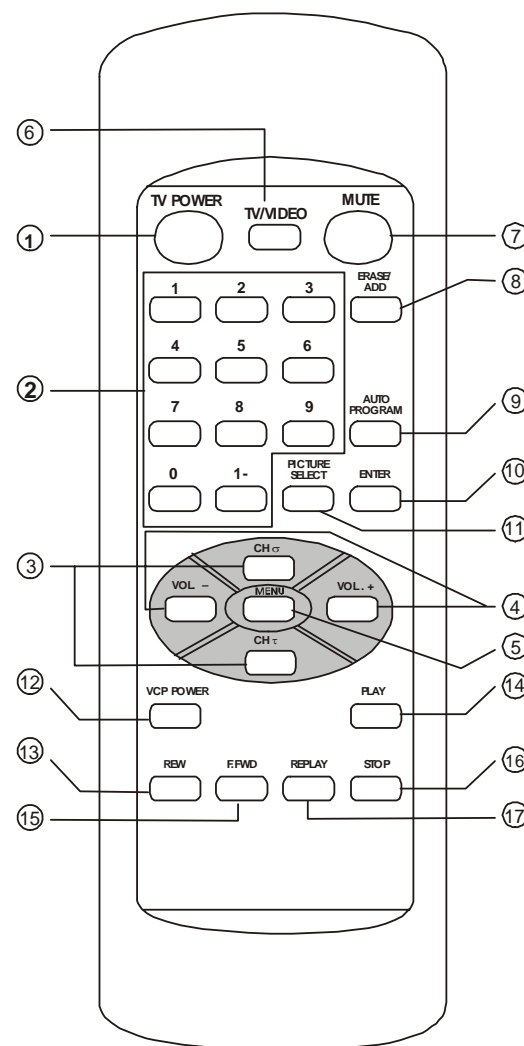10. **Dome Lights –** Provide additional illumination.

REMOTE CONTROL OPERATION

BATTERY INSTALLATION

Before attempting to operate the Remote Control, install the batteries as described below.

1) Turn the Remote Control face down. Press down on the ridged area of the battery cover, and slide it off.
2) Install Two "AAA" batteries as shown. Make sure that proper polarity (+ or -) is observed.
3) Slide the cover back until it clicks into position.

The Remote Control will operate the LCM1502TV, Flexvision Televisions and Video Media Players. It is not a universal remote control and will not control equipment from other manufacturers.

If a universal Remote Control is used with the LCM1502TV, choose the remote control encoding scheme for Flexvision Televisions when programming the remote.

REMOTE CONTROL OPERATION

1. **TV Controls:**
   1. **TV POWER**
      Press this button to turn on the set.
      Press the button again to turn the set off.
   2. **Direct Access (0-9,1--) Number Buttons**
      Use these buttons to select a channel. The channel number chosen will be displayed on the screen for about four seconds. To select channels 0-99, press two number buttons. For example, to select channel 8, press 0,8. To select channels above 100, press the 1—button, then the number buttons for the last two digits of the channel. For example, to select channel 115, press 1--, 1, 5.
   3. **CHANNEL Up and Down**
      Use these buttons to select pre-programmed channels or two select channels up or down. (also used to select desired function on the menu).
   4. **VOLUME Up and Down**
      Use these buttons to raise or lower the volume level of the Wired Headphones or External Speakers if installed. They are also used to make adjustments in the picture select mode.
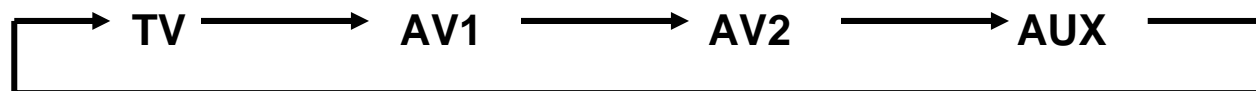   **NOTE:** These buttons will not affect the volume of wireless headphones or a wired RF modulator. When using these devices the volume must be adjusted with the headphone volume control or with your radio's volume control.
   5. **MENU Button**
      Press the MENU button. The MENU display appears. Use the Channel up and down buttons to select desired function, then press ENTER button to end the choice.

6. **TV/VIDEO Button**

Press this button to access the AUDIO/VIDEO input jacks, on the front and rear of the TV. As the button is pressed, the on screen display will cycle as follows:

TV → AV1 → AV2 → AUX

7. **MUTE Button**

Press this button to turn the TV sound off. Press again to restore sound to the previously set level. MUTE may also be released by pressing the VOLUME +/–.

8. **ERASE/ADD Button**

When tuned to a channel press this button to store or erase the channel from memory. The stored channel numbers are display in GREEN on the screen and the no stored channel numbers are in RED.
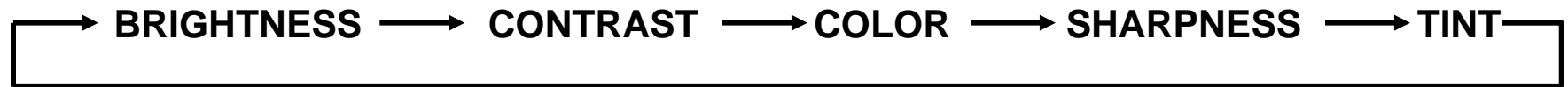
9. **AUTO PROGRAM Button**
    Select the regular channel broadcast TV or CABLE TV for AUTO PROGRAM. All the channel numbers for TV or CABLE TV will be scanned. The broadcasting signals will be detected and automatically stored.

10. **ENTER Button**
    Use this button to end the choice on the menu.

11. **PICTURE SELECT Button**
    Each time this button is pressed the on-screen picture adjustment display cycles through "adjustment screens" as follows:

$$\text{BRIGHTNESS} \longrightarrow \text{CONTRAST} \longrightarrow \text{COLOR} \longrightarrow \text{SHARPNESS} \longrightarrow \text{TINT}$$

2. **VCR Controls:**

12. **VCP POWER Button**
     This button is used to turn the unit on and off.

13. **"REW" REWIND Button**
     If this button is pushed while the tape is stopped, the tape will rewind. If this button is pushed while the tape is playing, the VCP will go into rewind search mode. For more information on search feature of the VCP, consult VCP owner's manual.

14. **PLAY Button**
     Press this button to activate play mode while a tape is loaded into the VCP. This button may also be used to dis-engage search and pause modes. For more information, consult the VCP owner's manual.

15. **"F.FWD" FAST FORWARD Button**
     If this button is pushed while the tape is stopped, tape will fast forward. If this button is pushed while the tape is playing, the VCP will go into fast forward search mode. For more information on search feature of the VCP, consult the VCP owner's manual.

16. **STOP Button**
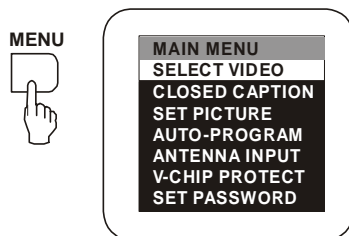   Press this button to stop the video tape.

17. **REPLAY Button**
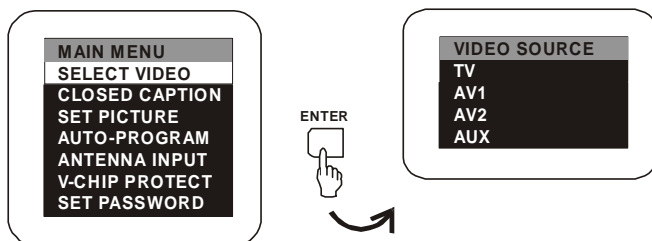   Press this button will rewind the video tape and immediately begin playback when the video tape is fully rewind.

ADJUSTING THE PICTURE

When watching TV programs, the quality of the picture can be adjusted to suit your taste.

1. **Press MENU. The main menu appears.**

MENU

```
MAIN MENU
SELECT VIDEO
CLOSED CAPTION
SET PICTURE
AUTO-PROGRAM
ANTENNA INPUT
V-CHIP PROTECT
SET PASSWORD
```

2. **Press SELECT VIDEO. The video source appears.**
    Press this button to access the AUDIO/VIDEO input jacks.

```
MAIN MENU
SELECT VIDEO
CLOSED CAPTION
SET PICTURE
AUTO-PROGRAM
ANTENNA INPUT
V-CHIP PROTECT
SET PASSWORD
```
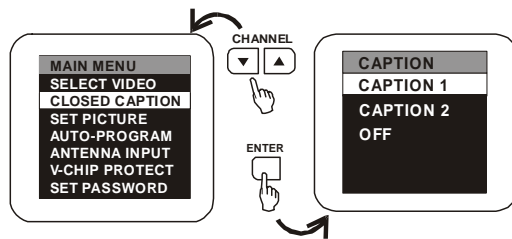
ENTER

```
VIDEO SOURCE
TV
AV1
AV2
AUX
```

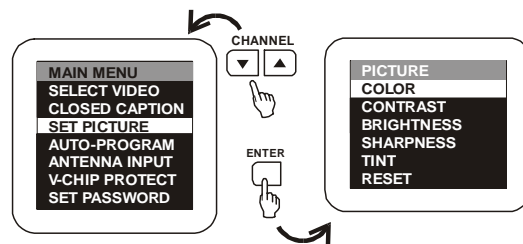**3. Select CLOSED CAPTION and then press ENTER.**

Closed captioning lets you display the audio portion of a program as text on the TV screen. This is useful to the hearing impaired or anyone who wants to watch a program without the sound.

There are two types of closed captioning available: C1 (Caption 1) and C2 (Caption 2). C1 display the full translation of the primary language in your area. C2 may be used as a source for secondary languages, simplified English, or other translations transmitted in your area.

Closed captioning is not available on all channels or at all times. Only specific programs are encoded with closed captioning information.

CHANNEL

| MAIN MENU |
| SELECT VIDEO |
| CLOSED CAPTION |
| SET PICTURE |
| AUTO-PROGRAM |
| ANTENNA INPUT |
| V-CHIP PROTECT |
| SET PASSWORD |

ENTER

| CAPTION |
| CAPTION 1 |
| CAPTION 2 |
| OFF |

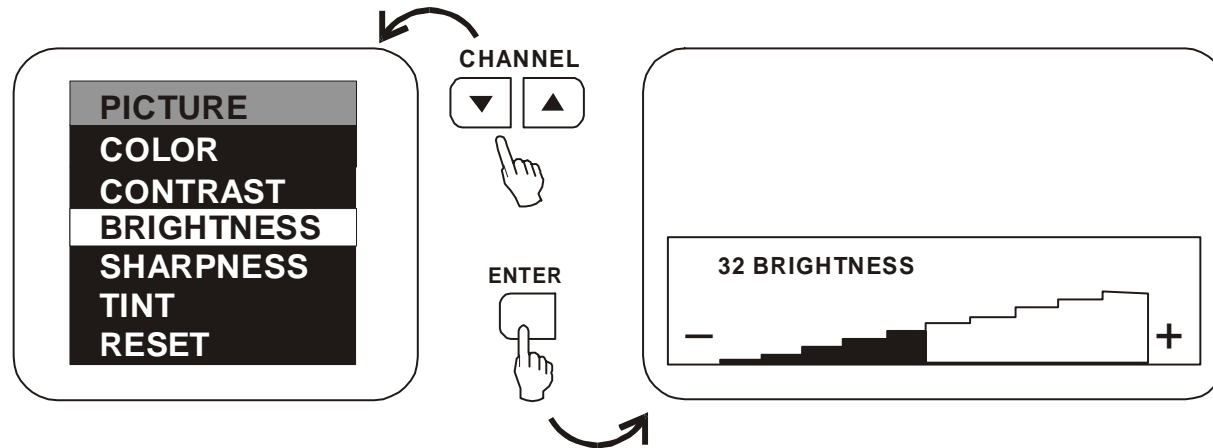**4. Press either CHANNEL up or down to select the function.**
Make sure the highlight bar is SET PICTURE and then press ENTER.

CHANNEL

| MAIN MENU |
| SELECT VIDEO |
| CLOSED CAPTION |
| SET PICTURE |
| AUTO-PROGRAM |
| ANTENNA INPUT |
| V-CHIP PROTECT |
| SET PASSWORD |

ENTER

| PICTURE |
| COLOR |
| CONTRAST |
| BRIGHTNESS |
| SHARPNESS |
| TINT |
| RESET |

-11-

6. Select the item to adjust. For example:

To adjust brightness, press CHANNEL up or down buttons to select BRIGHTNESS and press ENTER.

CHANNEL

PICTURE
COLOR
CONTRAST
BRIGHTNESS
SHARPNESS
TINT
RESET

ENTER

32 BRIGHTNESS

− +

6. Adjust the level:

Press VOLUME

VOLUME

− +

50 BRIGHTNESS

− +

7. To adjust other items, repeat all above.

Notes:

The menu or display disappears from the screen if you do not press + or – within a few seconds.

Whenever a menu or display disappears from the screen, the + and – buttons on the front of the TV become the volume adjustment buttons.

If you want to adjust the picture only. You can use the remote control, simply press the PICTURE SELECT.
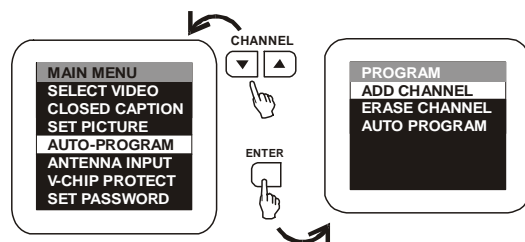
Description of adjustment items

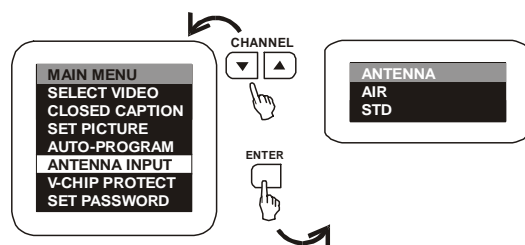| Item	Adjustment	
	Press VOLUME Down	Press VOLUME Up
CONTRAST	Decrease picture contrast for soft color	Increase picture contrast for vivid color
BRIGHTNESS	Darken the picture	Brighten the picture
SHARPNESS	Decrease picture sharpness	Increase picture sharpness
TINT	Decrease Tint	Increase Tint
COLOR	Decrease color intensity	Increase color intensity

To restore the factory settings

Select the item of picture while the main menu is displayed. Then select the item of RESET. All the picture functions (CONTRAST,BRIGHTNESS, SHARPNESS,TINT, COLOR) will go back to the factory settings.

8. Press either CHANNEL up or down to select the function.
Make sure the highlight bar is AUTO PROGRAM and then press ENTER.

CHANNEL

MAIN MENU
SELECT VIDEO
CLOSED CAPTION
SET PICTURE
AUTO-PROGRAM
ANTENNA INPUT
V-CHIP PROTECT
SET PASSWORD

ENTER

PROGRAM
ADD CHANNEL
ERASE CHANNEL
AUTO PROGRAM

9. Press either CHANNEL up or down select the function.
Make sure the highlight bar is ANTENNA INPUT and then press ENTER.

CHANNEL

MAIN MENU
SELECT VIDEO
CLOSED CAPTION
SET PICTURE
AUTO-PROGRAM
ANTENNA INPUT
V-CHIP PROTECT
SET PASSWORD

ENTER

ANTENNA
AIR
STD

CABLE TV (CATV) OPERATION

In addition to normal broadcast reception of VHF and UHF channels, if you are a cable TV subscriber, your new TV is capable of receiving many unscrambled cable channels without the use of a converter box.

When set to broadcast TV it receives channels 2~69. When set to one of the CATV mode (STD) it receives channels 1 ~ 125 (see chart on the following).

CABLE TV TUNING PROCEDURE

1. Connect the CATV cable directly to the TV antenna terminal. Your local cable system operator's converter box should not be required unless certain premium channels are scrambled.

2. Select the appropriate CATV setting with the TV/CATV button on the remote control.

3. You can now select CATV programs by using the CHANNEL up and down buttons or the number buttons on the remote control. The chart below lists the total channel and cable count.

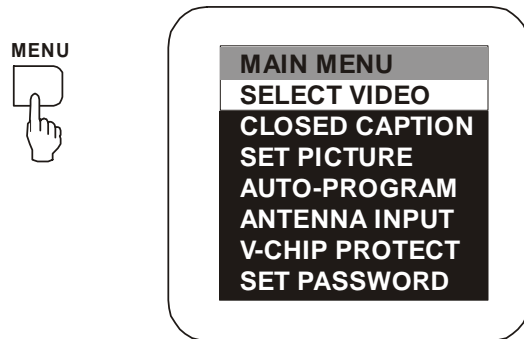| Channels	Off Air	Cable
Low VHF (Channel 01)	-	1
VHF (Channels 2 ~ 13) *	12*	12*
UHF (Channels 14 ~ 69) *	56	-
Low Midband A-5 ~ A-1 (Channels 95 ~ 99)	-	5
Midband (Channels 14 ~ 22 or A ~ I)	-	9
Superband (Channels 23 ~ 36 or J ~ W)	-	14
Ultraband (37 ~ 94 and 100 ~ 125 or w+29 ~ w+48)	-	84
Total*	68	125

PARENTAL CONTROL SETTINGS

This item helps parents set the standard for the programs their children are going to watch.

1. With the TV on, press the MENU button until special menu will appear.

2. Use the Channel up and down buttons to select the V-Chip Control item.

3. Use the VOL Up buttons to enter into V-Chip Control Settings.

4. After using the number buttons (0-9) to enter your password, the V-Chip Control menu will be displayed. If this is the first time you are using your V-Chip Control menu, your default password is 1111.

5. Select the V-Chip Control feature. Use the VOL Up buttons to toggle on or off.

6. Use the Channel Up and down buttons to select the V-Chip Control settings you wish to adjust. Descriptions of the V-Chip Control settings are on the next page.

7. Use the VOL Up buttons to adjust the V-Chip Control setting selected.

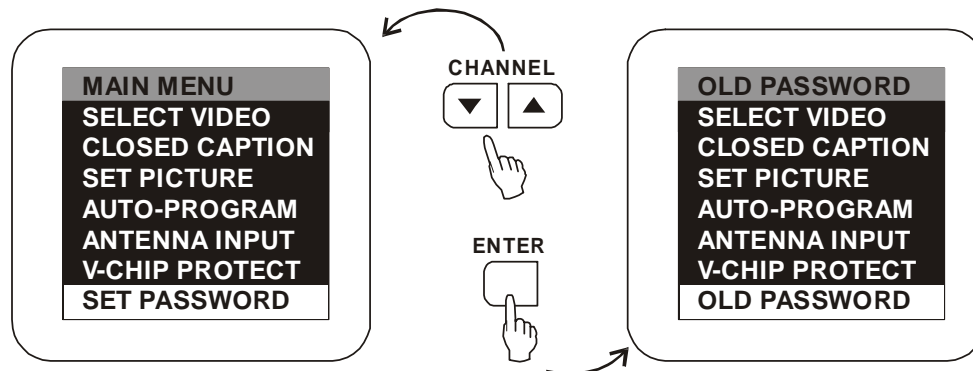8. Use the MENU button to return to the menu on the next level up.

SETTING THE V-CHIP

An age limitation can be set to forbid children to see and hear violent scenes or pictures for adults, etc. The TV/VCR responds to "TV RATING" and "MOVIE RATING". To use the V-CHIP function, you must register a password.

1. Press MENU. This main menu appears.

MENU

MAIN MENU
SELECT VIDEO
CLOSED CAPTION
SET PICTURE
AUTO-PROGRAM
ANTENNA INPUT
V-CHIP PROTECT
SET PASSWORD

2. Press either CHANNEL up or down buttons to select the function.
Make sure the highlight bar is SET PASSWORD and then press ENTER.

MAIN MENU
SELECT VIDEO
CLOSED CAPTION
SET PICTURE
AUTO-PROGRAM
ANTENNA INPUT
V-CHIP PROTECT
SET PASSWORD

CHANNEL
▼ ▲

ENTER

OLD PASSWORD
SELECT VIDEO
CLOSED CAPTION
SET PICTURE
AUTO-PROGRAM
ANTENNA INPUT
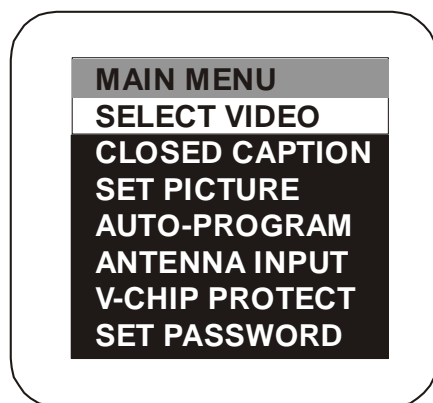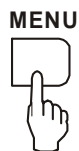V-CHIP PROTECT
OLD PASSWORD

3. Enter the OLD password (4 digits) using the Direct channel selection buttons (0-9).

4. Enter the NEW password (4 digits) using the Direct channel selection buttons (0-9).
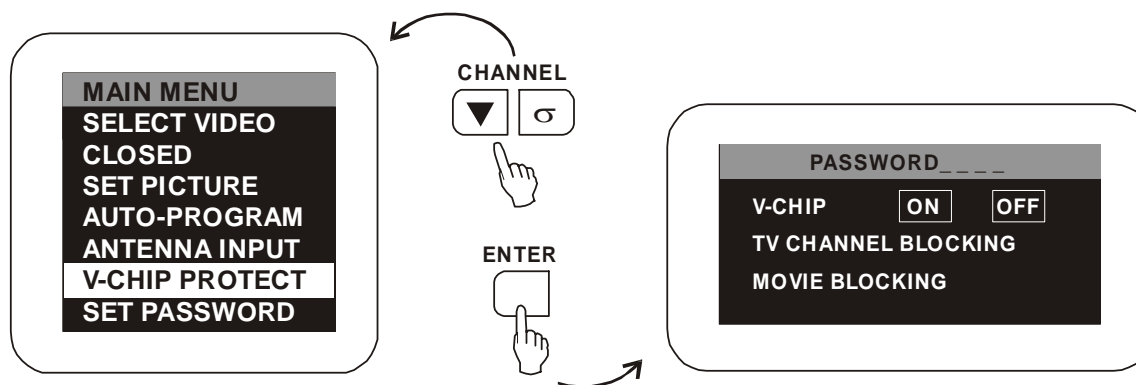
NOTES: The initial PASSWORD is 1111
             If you forget the password, you cannot set the V-CHIP.
            To avoid forgetting the password, write it down and Keep in a Safe place.

TO SET THE V-CHIP

1. Press MENU. The main menu appears.

MENU

MAIN MENU
SELECT VIDEO
CLOSED CAPTION
SET PICTURE
AUTO-PROGRAM
ANTENNA INPUT
V-CHIP PROTECT
SET PASSWORD

2. Press either CHANNEL up or down buttons to select the function.
Make sure the highlight bar is V-CHIP PROTECT and then press ENTER.

MAIN MENU
SELECT VIDEO
CLOSED
SET PICTURE
AUTO-PROGRAM
ANTENNA INPUT
V-CHIP PROTECT
SET PASSWORD

CHANNEL

▼ | σ

ENTER

PASSWORD _ _ _ _
V-CHIP   ON   OFF
TV CHANNEL BLOCKING
MOVIE BLOCKING

3. Enter the password (4 digits) using the Direct channel. Selection buttons (0-9).
appears in stead of the number.
Note: The initial password is 1111.

4. In the V-CHIP PROTECT menu. Press either CHANNEL up or down buttons to select the function.

5. Press either VOLUME + or VOLUME – to select the desired setting.

6. TV RATINGS CHART:

TV Y : ALL children
TV Y7: 7 years old and above
TV G : General Audience
TV PG : Parental guidance
TV 14 : 14 years old and above
TV MA : 17 years old and above

TV CHANNEL BLOCKING	
TV Y	None
TV Y7	None
TV G	None
TV PG	None
TV 14	None
TV MA	None

TV–Y	None	All															
TV–Y7	None	All	FV														
TV–G	None	All															
TV–PG	None	All	D	L	S	V	DL	DS	DV	LS	LV	SV	DLS	DLV	DSV	LSV	DLSV
TV–14	None	All	D	L	S	V	DL	DS	DV	LS	LV	SV	DLS	DLV	DSV	LSV	DLSV
TV–MA	None	All	L	S	V	LS	LV	SV	LSV								

When you select TV-Y7, TV-PG, TV-14 or TV-MA, press either CHANNEL up or down buttons to select the contained rating.

      V/FV-VIOLENCE
      S–SITUATIONS
      L–LANGUAGE
      D–DIALOG

Press VOLUME + or – to select contained rating.
NOTE: The V-CHIP function is activated only on programs and tapes that the rating signal.

7. MOVIE RATINGS CHART:

M OVIE B LO CKIN G		
MP G	BLOCK	SHOW
MP PG	BLOCK	SHOW
MP PG-13	BLOCK	SHOW
MP R	BLOCK	SHOW
MP NC-17	BLOCK	SHOW
MP X	BLOCK	SHOW
MP NR	BLOCK	SHOW

MP G : ALL ages
MP PG : Parental guidance
MP PG-13 : Parental guidance, less than 13 years old
MP R : Under 17 years old, Parental guidance suggested
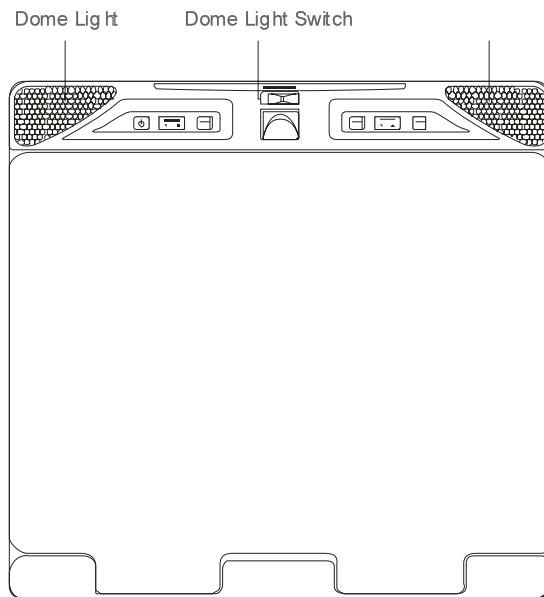MP NC-17 : 17 years old and above
MP X : Adult only
MP N/R : Movie has not been rated or ratings do not apply

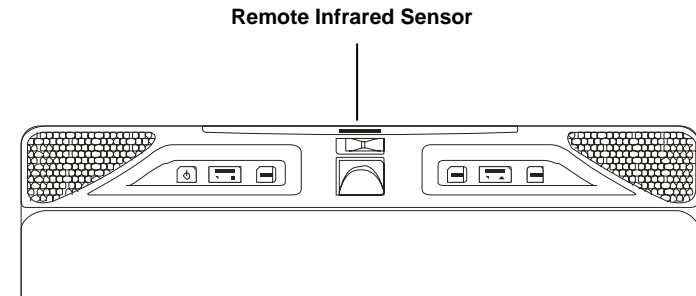Press VOLUME + or – to select the contained rating (Block or Show).

OPERATION

OVERHEAD DOME LIGHTS

A three-position slide switch controls the Dome Lights on the LCM1502TV. Sliding the switch to the ON position will turn the Dome Lights ON. The OFF position will prevent the Dome Lights from turning ON at all times and the auto position will allow the Dome Lights to turn ON and OFF with the vehicle's interior lighting. Do not leave the vehicle unattended with the Dome Lights switch in the ON position, as this could result in a discharged battery.

REMOTE INFRARED SENSOR/REPEATER

The LCM1502TV incorporates a Infrared Sensor which relays the signals from the Remote Control to allow the LCM1502TV to be controlled simply by pointing it's Remote Control at the remote sensor. This provides control of auxiliary equipment such as an Flexvision VCP or DVD Player. The Remote Infrared Sensor can relay signals from most manufacturers Remote Control to its respective component connected to the Video 1 and 2 inputs. In this case you must use the Remote Control supplied with the other manufacturers component.
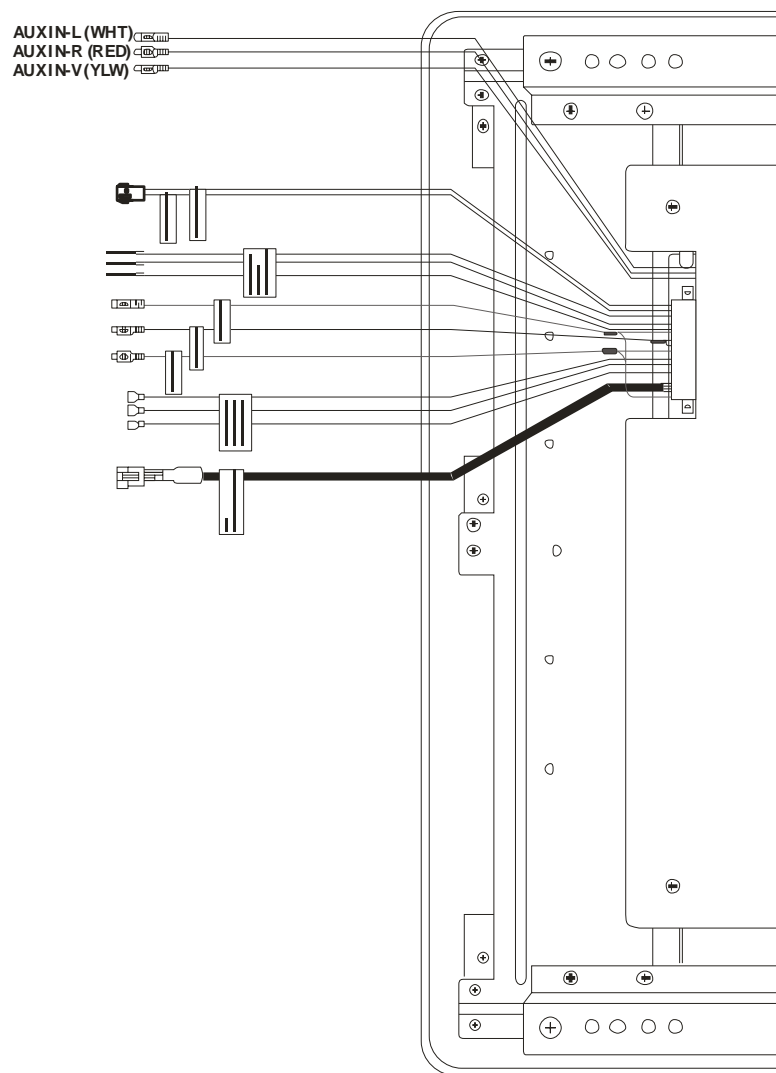
Dome Light   Dome Light Switch

Remote Infrared Sensor

VIDEO OUTPUT

The LCM1502TV provides a video output for an optional Video monitor(s). This output will provide a video signal that duplicates the signal displayed by the LCM1502TV to an additional Monitor or Video display. Please see your installer for more information.

AUXILIARY A/V STEREO INPUTS JACK

The LCM1502TV is equipped with an auxiliary A/V input connector. The inputs are provided to facilitate the connection of Audio/Video equipment, such as a camcorder or video game system. To play a source with these inputs, an RCA patch cord is required to connect the Audio/Video signals to their respective jacks. Mono audio sources will require the use of an RCA Y-cable (P/N 0892165) to connect to both right and left inputs.

AUXIN-L (WHT)
AUXIN-R (RED)
AUXIN-V (YLW)

OPTIONAL ACCESSORIES
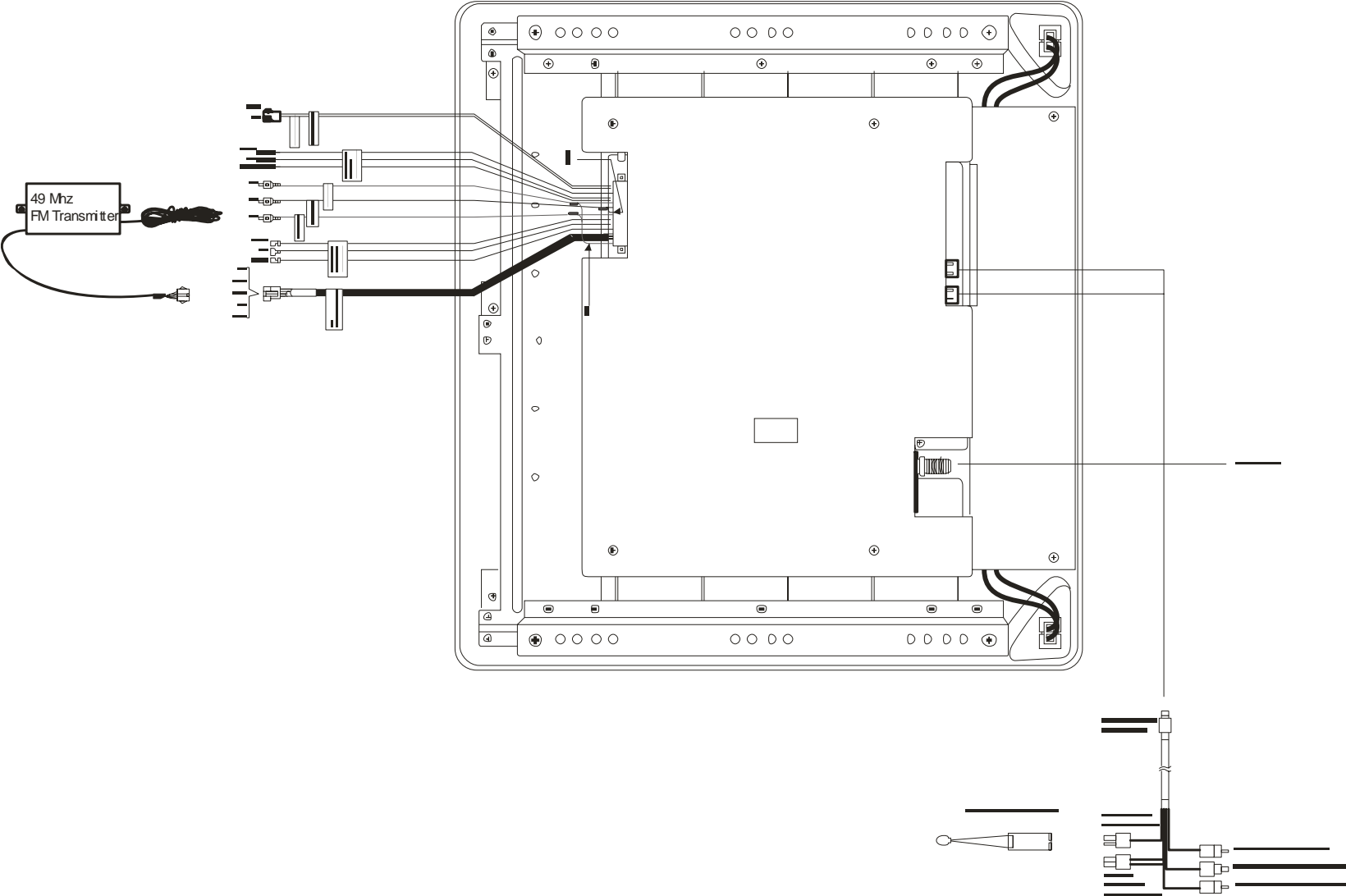
WIRELESS HEADPHONES

The LCM1502TV includes a 49MHz RFTransmitter for use with Flexvision Wireless Headphones (P/N WHPRF01). Turning the Headphone switch ON will activate the internal RF Receiver, the volume can then be adjusted using the controls on each headset. Use the adjustment knob on the headset to fine tune the Headphones to the proper frequency. Any number of wireless headphones can be used.

Consult the documentation accompanying the Flexvision Wireless Headphones for more information.

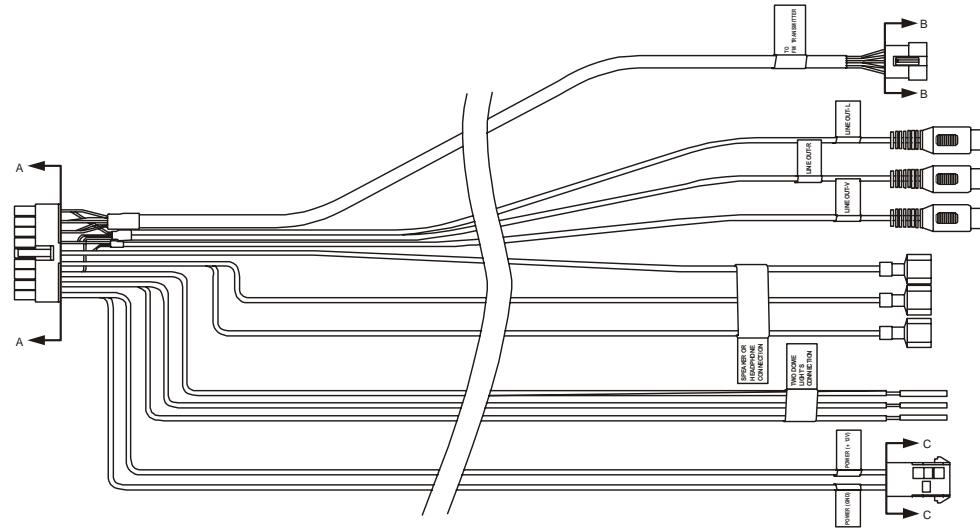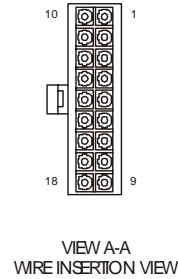**WIRED FM MODULATOR (P/N FMT100)**

Your video system may be equipped with an optional RF modulator, that allows you to listen to the LCM1502TV's audio signal by tuning your vehicle's radio to the selected frequency, (88.7 or 89.1- check with your installer) and tuning on the remote mounted RF modulator switch. (In most cases this toggle switch will be located underneath the driver's side of the dash, check with your installer for the exact location.) Whenever the RF Modulator is ON, broadcast radio reception will be poor. Turning the remote mounted toggle switch OFF will allow for normal radio reception.

TYPICAL SYSTEM CONNECTIONS

49 Mhz
FM Transmitter

18 PIN MAIN HARNESS DETAIL

PIN NO.	COLOR	FUNCTION	AWG	TERMINATION
1	BLACK	LINE AUDIO GROUND	24	RED/WHITE RCA CONNECTOR
2	BLACK	AUDIO GROUND (SHIELD)	24	5-PIN CONNECTOR (PIN 2)
3	BLACK	POWER GROUND	24	5-PIN CONNECTOR (PIN 5)
4	RED	LINE AUDIO (R) OUT	18	RED RCA CONNECTOR
5	YELLOW	VIDEO OUT	18	YELLOW RCA CONNECTOR
6	BLACK	SPEAKER OUT GROUND	18	MALE SPADE TERMINAL
7	WHITE	LINE AUDIO (L) OUT	24	WHITE RCA CONNECTOR
8	BLACK	DOME LIGHT SEE OWNER MANUAL		
9	BLACK	POWER GROUND	18	2-PIN CONNECTOR (PIN 2)
10	RED	AUDIO (R) OUT	24	5-PIN CONNECTOR (PIN 3)
11	WHITE	AUDIO (L) OUT	24	5-PIN CONNECTOR (PIN 1)
12	RED	+12V POWER	24	5-PIN CONNECTOR (PIN 4)
13	BLACK	VIDEO GROUND	18	YELLOW RCA CONNECTOR
14	GRAY	SPEAKER OUT LEFT	18	MALE SPADE TERMINAL
15	GREEN	SPEAKER OUT-RIGHT	18	MALE SPADE TERMINAL
16	RED	DOME LIGHT SEE OWNER MANUAL		
17	WHITE	DOME LIGHT SEE OWNER MANUAL		
18	RED	+12V POWER	18	2-PIN CONNECTOR (PIN 1)

VIEW A-A
WIRE INSERTION VIEW

Negative Dome Light Switching
White – Entry switch / Negative
Black – Constant +12VDC Dome circuit
Red – Chassis Ground

Positive Dome Light Switching
White – Entry Switch / Positive
Black – Chassis Ground
Red – Constant +12VDC Dome Circuit

Troubleshooting

PROBLEM	SOLUTION
Poor TV Reception	• Perform auto programming of the tuner • Verify antenna condition. • NOTE: Due to the nature of TV signals, vehicle motion, direction the vehicle is facing, distance from the transmitter, nearby surroundings and weather may adversely affect TV reception. These conditions may result in the following: picture roll, "snowy" picture, or momentary loss of color. Please refer to page 2 for more information on TV reception.
Poor radio reception (FM modulator installed)	• Check the condition of the vehicle's radio antenna. • Verify that the antenna is fully raised • If a wired RF modulator has been installed, verify that it's switch is turned to the off position
No power to LCD	• Verify +12VDC on red wire at power harness going to the video pod. Verify ground connection.
Power but no video or sound	• Verify connections at both ends of source component harness.
IR sensor inoperative	• Verify that the batteries in the remote are fresh • Verify that the remote eye is not obstructed. • Verify that the infrared transmitter is affixed over the sensor eye of the component to be controlled

Specifications

LCD Brightness	450 nits (min)
Operation Temperature	-20°C~ 65°C
Storage Temperature	- 40°C ~ 80°C
Video Display System	NTSC
Audio Output	0.6W (Variable)
Current Draw	3.2A
Weight	6 kgs
Overall Dimensions	15.5"x14.5"x2.5" (H x W x D)

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